

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of	)	
	)	
Numbering Resource Optimization	)	CC Docket No. 99-200
	)	
Connecticut Department of Public Utility Control	)	RM No. 9258
Petition for Rulemaking to Amend the	)	
Commission's Rule Prohibiting Technology-	)	
Specific or Service-Specific Area Code Overlays	)	
	)	
Massachusetts Department of Telecommunications	)	NSD File No. L-99-17
and Energy Petition for Waiver to Implement a	)	
Technology-Specific Overlay in the 508, 617, 781,	)	
and 978 Area Codes	)	
	)	
California Public Utilities Commission and the	)	NSD File No. 99-36
People of the State of California Petition for	)	
Waiver to Implement a Technology-Specific or	)	
Service-Specific Area Code	)	
	)	
North American Numbering Council	)	NSD File No. 99-51
Recommendation Concerning Replacement of	)	
Central Office Code Utilization Survey	)	

COMMENTS OF SBC COMMUNICATIONS INC.

I. INTRODUCTION

SBC Communications Inc. ("SBC") commends the Commission for its detailed, comprehensive, and carefully thought out Notice of Proposed Rulemaking ("NPRM") on numbering resource optimization and related issues.<sup>1</sup> The NPRM provides a giant step toward establishing a comprehensive set of policies that will slow the rapid pace of area code exhaust

<sup>1</sup> Numbering Resource Optimization, *Notice of Proposed Rulemaking*, CC Docket No. 99-102 (released June 2, 1999) [hereinafter *NPRM*].

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throughout the nation, and it provides a means to address many of the shortcomings in the report of the North American Numbering Council regarding numbering resource optimization (“NANC NRO Report”).<sup>2</sup> In particular, the NPRM’s review of existing Commission policies concerning area code relief and ten-digit dialing, its focus on “inject[ing] a greater degree of discipline” into numbering resource administration,<sup>3</sup> and its recognition of the need to consider the relative costs and benefits of numbering optimization proposals and to provide for carriers’ recovery of the costs of implementing numbering resource optimization techniques, are welcome and important developments since the Commission held briefing on the NANC NRO Report.

The rigorous attention to detail and extensive list of inquiries presented in the NPRM demonstrates that the Commission has thoroughly investigated numbering issues and carefully considered the available alternatives. SBC appreciates the Commission’s dedication to this serious issue, which raises some of the most important decisions concerning numbering resource administration and usage in the history of the North American Numbering Plan (“NANP”). In these comments, SBC responds to as many of the detailed questions posed by the Commission with as much information as possible given time, resource, and space limitations.

SBC supports many of the solutions proposed by the Commission in the NPRM, including (1) the adoption of a “carrier choice” regulatory framework, (2) the development and implementation of enhanced standards governing assignment and use of numbering resources, to ensure that carriers receive and retain only the numbering resources that they actually need, (3) implementation of thousands block number pooling with mandatory efficient data

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<sup>2</sup> See The North American Numbering Council Report Concerning Telephone Number Pooling and Other Optimization Measures, *Comments of SBC Communications Inc.*, at 2-10, NSD File No. L-98-134 (filed Dec. 21, 1998) [*SBC NRO Report Comments*].

<sup>3</sup> See *NPRM* at ¶ 37.

representation (“TBNP”) in the largest 100 MSAs by LNP-capable carriers who do not meet a prescribed utilization threshold, (4) revision of area code relief policies to ensure more efficient use of area codes and to minimize societal costs of area code relief. SBC also supports the Commission encouraging state commissions to consolidate rate centers where consolidation would not effect rates for local service and the benefits of consolidation otherwise exceed the costs. SBC discusses these proposals in Sections III-VII below, and offers suggestions for how best to implement each proposal to provide the greatest benefit to consumers, state commissions, the Commission, and carriers in the most cost-effective manner.

SBC discusses why the Commission should not adopt the few remaining alternatives discussed in the NPRM. In Section VIII, SBC explains why the proposed “pricing strategy” would very likely not provide significant benefits over the other proposals suggested in this proceeding, and would impose unnecessary costs for consumers. In Section V.E.2, SBC explains why the Commission should prohibit unassigned number porting (“UNP”), even on a voluntary basis between carriers, because even if this option provided any number optimization benefits at all (which is at best questionable), it would consume a huge amount of the signaling capacity that would need to be dedicated to number porting and thousands-block number pooling could potentially impair or undermine the efficacy of number porting and pooling. Also in Section VII.E.1, SBC explains why the Commission should not seek to transition to individual telephone number pooling (“ITN”), which likely would provide little marginal benefit above thousands-block pooling and which would be extremely expensive to implement, and could *increase* the demand for numbering resources (as it has for toll free services in the 800, 888, and 877 NPAs).

Before reviewing these specific proposals, in Section II, SBC examines the goals and objectives that the Commission seeks to accomplish in this proceeding and the underlying causes of the current problem. It is to this discussion that these comments now turn.

## **II. THE COMMISSION SHOULD ADOPT COMPETITIVELY-NEUTRAL AND COST-EFFECTIVE POLICIES THAT SLOW AREA CODE EXHAUST**

The NPRM identifies two primary goals for this proceeding. First, the NPRM states that the Commission seeks to “to address the underlying drivers of area code exhaust so that consumers are spared the enormous costs and inconveniences associated with the rapid pace of implementation of new area codes.”<sup>4</sup> Second, the NPRM states that the Commission seeks to “prolong the life of the NANP,”<sup>5</sup> because the Commission is concerned that the rapid pace at which area codes are being introduced might lead to premature exhaust of the NANP. The NPRM also sets forth six objectives for numbering optimization policies. These objectives are to: “(1) minimize the negative impact on consumers; (2) ensure sufficient access to numbering resources for all carriers that need them to enter into or to compete in telecommunications markets; (3) avoid, or at least delay, exhaust of the NANP and the need to expand the NANP; (4) impose the least societal cost possible, in a competitively neutral manner, while obtaining the highest benefit; (5) ensure that no class of carrier or consumer is unduly favored or disfavored by our optimization efforts; and (6) minimize the incentives for carriers to build and carry excessively large inventories of numbers.”<sup>6</sup>

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<sup>4</sup> *NPRM* at ¶ 5. The Commission restates this goal as “slow the rate of number exhaust in this country as evidenced by the ever-increasing rate at which new area codes are assigned.” *NPRM* at ¶ 1.

<sup>5</sup> *See NPRM* at ¶ 1.

<sup>6</sup> *NPRM* at ¶ 6.

SBC agrees that slowing the pace of area code relief in a cost-effective manner in order to minimize the cost and inconvenience of area code relief to consumers and society should be a major goal of this proceeding – in fact, it believes that this should be the *primary* goal of this proceeding. However, SBC believes that concerns regarding exhaust of the NANP and the costs to expand the NANP are wholly speculative at this time, and the Commission should not base its policies on such speculation.<sup>7</sup> SBC strongly supports the six objectives listed of this proceeding listed in the NPRM, with the exception of objective number three concerning NANP exhaust. These points are addressed in turn below.

***A. THE PRIMARY GOAL OF THIS PROCEEDING SHOULD BE TO SLOW  
AREA CODE RELIEF IN ORDER TO MINIMIZE COSTS TO CONSUMERS  
AND SOCIETY***

SBC wholeheartedly agrees that slowing the pace of area code exhaust in order to minimize costs and inconvenience to consumers and to society should be a major goal of this proceeding – in fact, it believes that this should be the *primary* goal of this proceeding. SBC also agrees that in order to accomplish this goal, it is necessary for the Commission to address the underlying drivers of area code relief, which are addressed below. However, SBC respectfully suggests that *area code relief, per se, is not the problem* – the problem is *the costs and inconvenience to consumers and society* that are created by *rapid and (in some cases) repeated* area code exhaust.<sup>8</sup> Exhausting old area codes and introducing new ones is a necessary and planned part of the NANP, and some consumer and societal cost is inherently a part of this

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<sup>7</sup> This does not mean that the Commission should ignore carrier utilization rates or not be concerned about optimizing utilization of NANP resources – quite the contrary. Under-utilization of resources is a major factor causing the current rapid pace of area code exhaust, and improving carrier utilization rates should be a major objective of this proceeding.

system (as with the construction, renovation, and demolition of the freeways in the national highway system). The problem is not simply the introduction of new area codes, but the relatively high degree of inconvenience and costs that consumers and society have been forced to bear in a short amount of time, which has been caused by the rapid exhaust and introduction of area codes since the passage of the Telecommunications Act of 1996.

While this distinction may at first seem minor, SBC suggests it is not. First, the distinction underscores the fact that the Commission simply cannot eliminate all area code relief. Area code relief will continue to be necessary despite the policies adopted in this proceeding. Second, the distinction focuses on the most important issue in this proceeding – finding cost-effective and efficient means to minimize the *costs and inconvenience to consumers and society* caused by the rapid introduction of new area codes. To address this problem, the Commission's policies should slow the pace of area code relief. In addition, the Commission should change its policies concerning overlay area codes and ten-digit dialing, to maximize the efficient use of area codes and to minimize costs to consumers when area code relief is necessary.<sup>9</sup>

**1. New Entrant Demand for Codes to Establish or Expand Service Area  
“Footprint” is the Primary Cause of Rapid Area Code Exhaust**

The NRPM correctly acknowledges that, in order to effectively slow the current introduction of new area codes, the Commission must “address the underlying drivers of area code exhaust.”<sup>10</sup> The NPRM suggests as drivers the existing number assignment system, which results in “the allocation of telephone numbers to multiple service providers in large blocks on a

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<sup>8</sup> See *NPRM* at ¶ 4 (“[t]he effect on consumers of having to undergo, in some cases, multiple area code changes in relatively short time frames is an unacceptable byproduct of burgeoning competition in the telecommunications marketplace.”).

<sup>9</sup> Changes to area code relief and ten-digit dialing policies are discussed in Section VI, *infra*.

<sup>10</sup> *NPRM* at ¶ 5.

geographic basis,” the development and expansion of competition in wireline and wireless services, and customers “obtaining additional telephone lines to support additional services such as Internet, data, and facsimile services,” and the absence of regulatory restraints.<sup>11</sup>

While these factors, as well as population/economic growth and regulatory policies, all contribute to the demand for numbering resources and thereby to the exhaust for area codes, they do not all contribute equally. The NPRM makes no attempt to quantify which factors are most responsible for creating the increase in demand. Two of these factors combine to create the overwhelming cause of the current problem: the number assignment system, in which carriers receive blocks of 10,000 numbers within individual rate centers, and the rapid entry of a significant number of new carriers, primarily wireline carriers, in local markets as a result of the introduction of local exchange competition.<sup>12</sup>

The rapid pace of area code relief is directly attributable to the development of wireline competition for local exchange service. In the five years proceeding the passage of the Telecommunications Act of 1996, an average of four new area codes were introduced a year. That average increased more than *5-fold* between 1996-98, exceeding 22 new area codes

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<sup>11</sup> See *NPRM* at ¶¶ 1, 3, 15.

<sup>12</sup> Neither of these factors alone would be sufficient to create the explosive growth for numbering resources. The existing number assignment system, although it is not perfectly efficient, does not cause rapid area code relief by itself – in fact, wireline and wireless carriers have used this system for many years without causing unacceptably high levels of area code exhaust. Nor is this system workable only as long as there is only one carrier providing one type of service, as the *NPRM* suggests, (see *NPRM* at ¶ 1), for wireless carriers have used the system to provide competitive services efficiently for years. Similarly, although growth in the number of carriers logically would increase demand for numbering resources to some degree, the growth in carriers by itself need not create the level of demand for numbering resources seen in the past two years without the existing rate center assignment system.

annually.<sup>13</sup> In the State of California, SBC estimates that the number of NXX codes assigned each year also increased more than *5-fold*, from an average of 294 between 1991-95 to an average of 1,538 between 1996-98, despite severe rationing that constrained the number of NXX codes available for assignment in 1997 and 1998. Similarly, SBC estimates that in the five states where Southwestern Bell Telephone Company (“SWBT”) serves as an incumbent local exchange carrier, the number of assigned NXX codes nearly tripled between 1995 and 1997 – from 706 in 1995 to a high of 1,927 in 1997.

The overwhelming majority of this high demand for NXX codes, which gives rise to the demand for new area codes, is created by new entrants seeking to establish service area “footprint,” particularly new entrants in wireline local exchange markets. In order to establish this “footprint” under the existing number assignment system, a wireline new entrant requires a NXX code in each rate center in which it is seeking to offer service, which are “initial” NXX codes.<sup>14</sup>

In the California CO code lottery for the month of June, 1999, approximately 82 percent of the total NXX code requests were for “initial” NXX codes.<sup>15</sup> CLECs received nearly

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<sup>13</sup> Between 1991 and 1995, 24 new area codes were introduced in the United States, an average of just under five new area codes per year. 67 new area codes were introduced in 1996, 1997, and 1998, an average of just over 22 new area codes per year. See Lockheed Martin, NANP Exhaust Study, at 2-5 (April 21, 1999) [hereinafter *Lockheed Martin Study*], attached to Letter from Alan Hasselwander, NANC, to Lawrence Strickling, FCC (May 12, 1999).

<sup>14</sup> As the *NPRM* notes, the first NXX code assigned to a carrier in a rate center is referred to as an “initial” code in industry nomenclature; subsequent NXX codes in the same rate center are referred to as “growth” NXX codes. See *NPRM* at ¶¶ 55-56.

<sup>15</sup> See Order Instituting Rulemaking/Investigation on the Commission’s Own Motion Into Competition for Local Exchange Service, *Report of the North American Numbering Plan Administrator on NXX Code Lottery, Status Report 33*, at “Telephone Central Office Code Lottery Applications” Attachment, at 1-5, Docket Nos. R.95-04-043/I.95-04-044 (Cal. P.U.C. filed July 1, 1999) (563 initial NXX code requests and 125 growth NXX code requests).



70 percent of all NXX codes assigned to the industry for the first five months of this year.<sup>16</sup> Since 1996, SBC estimates that CLECs in California have been assigned more than 3,400 codes – several times more than the total number of codes assigned to the rest of the industry in the state of California between 1990 and 1995, and far more than the rest of the industry combined since 1996. For the first five months of this year, CLECs received *5 times* more NXX codes than wireless, and *more than ten times* more NXX codes than all ILECs combined.<sup>17</sup> There should be no doubt that requests by new entrants for numbering resources to establish service area footprint is the main cause of the rapid rate of area code exhaust.

This new entrant demand is exacerbated by the existing structure to assign telephone numbers in specific rate center areas in blocks of 10,000 numbers. A substantial portion of these new entrant NXX codes are for service area footprint. It has been SBC's experience in the states where it provides local exchange service that most CLECs in most areas hold only one NXX code for footprint; for example, in the 816 area code in Missouri (serving Kansas City and surrounding areas), more than 89 percent of the NXX codes assigned to CLECs are initial codes.<sup>18</sup> However, some carriers routinely request two NXX codes – an initial NXX code and a growth NXX. A handful of carriers request several growth NXX codes – in a handful of situations, new entrant wireline carriers have more than ten NXXs in a single rate center.<sup>19</sup>

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<sup>16</sup> See NANPA, June 1999 California Monthly Code Assignments Report (showing 317 NXX codes assigned to wireless & paging carriers, 69 to incumbent local exchange carriers, and 869 to "CLCs" between January and June, 1999).

<sup>17</sup> *Id.*

<sup>18</sup> Data compiled from the March, 1999, Local Exchange Routing Guide ("LERG").

<sup>19</sup> It is quite likely that many of the "growth" codes assigned to carriers are unnecessary. If carriers are requesting more codes for "footprint" than necessary, establishing stringent requirements on "growth" code requests is necessary, and should be sufficient, to curb potential excesses.

When all CLEC codes are aggregated, SBC estimates that approximately 80 percent of new entrant wireline codes are initial codes; 20 percent are growth codes.<sup>20</sup> Thus, the high demand for numbering resources for new entrants manifests itself largely (but not entirely) in initial NXX code requests.

Although detailed data is not available concerning nationwide number utilization rates, it is generally accepted that these CLEC “footprint” codes are among the most underutilized resources in the NANP today. In major metropolitan areas, where there are a substantial number of wireline local carriers in the market, LNP has been fully implemented and the numbers in these “footprint” codes will be used primarily for new customers and to provide additional telephone numbers to existing customers. SBC has reason to believe that over 100 such codes, although “activated” in the LERG, are not actually “in service” today in the areas where it serves as the incumbent local exchange carrier. Thus, it is reasonable to conclude that new entrants in wireline markets are actually utilizing a relatively small percentage of the telephone numbers assigned to them.

SBC does not offer this observation in an effort to ascribe blame for the current situation; quite the contrary. SBC is *itself* a new entrant in wireline local markets, and it plans to enter 30 major metropolitan local exchange markets over the next three years. In those areas, SBC will need numbering resources just like most other new entrants in local wireline markets. However, the Commission should realize that the large number and relatively low utilization of these new entrant “footprint” codes creates special issues for national numbering optimization policies.

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<sup>20</sup> Data compiled from the March, 1999, LERG.

First, logic dictates that this “footprint” demand is a temporary phenomenon. Establishment of service footprint in a rate center is a one-time event for each carrier. The severity and duration of this “spike” in demand is driven primarily by the number of carriers entering a particular market at a particular time and competitive market conditions. There is a limit to the number of carriers that any individual market can bear, in telephony as in other markets. Accordingly, at some point, the current level of demand for “footprint” codes will subside as a result of competitive market factors.<sup>21</sup>

Once a LNP-capable carrier establishes its “footprint” in an area, it likely will have very low demand for future numbering resources. With LNP, new entrants have access to all telephone numbers assigned or reserved to other carriers’ customers, in addition to the telephone numbers assigned to them. As these new entrants win customers, they have access to these customers’ telephone numbers, working and reserved. New entrants only need their own numbering resources to provide service to new customers, or to add additional lines to customers’ services. Thus, the high demand caused by “footprint” codes likely is a temporary phenomenon, and it will not be continued or replicated through demand for growth codes.

Second, the most direct and cost-effective way to slow the pace of area code relief is to ensure that this “footprint” demand is satisfied in an efficient manner. Administrative controls can prevent waste of resources by ensuring that carriers do not receive multiple

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<sup>21</sup> It is unclear at this point how long the current expansion of footprint will continue at its current pace, but it logically must subside at some point. SWBT estimates that in the five states where SWBT is an incumbent local exchange carrier, NXX code demand dropped substantially between 1997 and 1998. In 1997, a record number of NXX codes – 1,972 – were assigned. In 1998, that number fell to 1,415 – a reduction of 557 NXX codes (more than 28 percent) in a single year. While this limited data is insufficient to establish that the “spike” in footprint expansion has reached its peak in these states, SBC suggests that the substantial reduction in a

“footprint” resources unless they need them, and it can ensure that resources are put in use promptly.

Finally, although SBC agrees with the Commission’s tentative conclusion that it should adopt administrative rules to control the assignment of “growth” codes (such as a utilization threshold), such rules will not address one major source of the current problem – the assignment of initial service “footprint” NXX codes. To the extent that demand for “footprint” codes continue, TBNP can increase efficiency of the use of resources by assigning only 1,000 telephone numbers in an initial block. However, TBNP is a very expensive “solution,” and when new entrant “footprint” demand slows down, as logic suggests it must, TBNP would provide only a fraction of the benefits.

## **2. Rapid Area Code Relief and the High Demand For NXX Codes is Concentrated in Major Metropolitan Areas**

The NPRM recognizes that major metropolitan areas of the country “are likely to be subject to the majority of area code relief proceedings.”<sup>22</sup> Nearly two-thirds of the area codes that will exhaust in the next three years, according to NANPA’s 1999 Central Office Code Utilization Survey (“COCUS”), will be in area codes within the largest 100 MSAs.<sup>23</sup> Thus, the highest demand for NXX codes that is causing rapid area code exhaust is occurring predominantly in the largest major metropolitan areas.

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single year should give the Commission pause and encourage it to seek more data concerning current NXX code demand before taking any action in this proceeding.

<sup>22</sup> See *NPRM* at ¶ 146.

<sup>23</sup> The 1999 COCUS estimates 118 area codes will exhaust by the end of 2003. 75 of these area codes are within the largest 100 MSAs. Of course, area code and MSA boundaries are not coincident, and in many instances an area code will fall partly within and partly without one of the largest 100 MSAs. Throughout these comments, the “area codes within the largest 100 MSAs” means area codes in whole or in part within the boundaries of the largest 100 MSAs.

Again, this growth characteristic is driven largely by new entrants in local wireline service markets. There are 31 competitive wireline carriers with assigned numbering resources in the Los Angeles MSA, 27 in the San Francisco and San Jose MSAs, and 24 in the Dallas MSA. In contrast, areas outside the largest 100 MSAs have far fewer CLECs and lower NXX demand and area code relief. The 806 area code in West Texas, for example, has only seven competitive wireline carriers with assigned resources; the 580 area code in Western Oklahoma, has only three. Even within the largest 100 MSAs, numbering resource demand often is concentrated in the largest markets; Tulsa, Oklahoma (3) and El Paso, Texas (2), for example, although within the largest 100 MSAs, have a fraction of the number of new entrants in Los Angeles, the San Francisco Bay Area, or Dallas. A more detailed analysis of the stratification in demand, summarizing data from selected area codes in the states where SBC telephone companies provide local exchange service, is shown below:<sup>24</sup>

MSA	MSA Size	NPA	Number of CLECs Assigned Resources	Total NXX Codes Assigned To CLECs
Los Angeles, CA	1	310	31	160
Dallas, TX	11	214	24	77
St. Louis, MO	16	314	11	71
Kansas City KS	28	913	10	50
San Francisco, CA	29	415	27	147
San Jose, CA	31	408	27	120
Tulsa, OK	70	918	3	10
El Paso, TX	74	915	2	6
West Texas	Outside Top 100 MSAs	806	7	12
Stockton, CA	Outside Top 100 MSAs	209	10	70
East Texas	Outside Top 100 MSAs	409	6	44
SE Missouri	Outside Top 100 MSAs	417	5	8
W. Oklahoma	Outside Top 100 MSAs	580	3	6

<sup>24</sup> Data compiled from the July, 1999, LERG.

It is unlikely that new entrants will seek to enter rural areas in the immediate future, for many reasons. First, the vast majority of access lines are contained in the largest 100 MSAs; approximately 88 percent of Pacific Bell's access lines are within the largest 100 MSAs. Second, large businesses are concentrated in the largest metropolitan areas. Third, the largest metropolitan areas are also the major population centers. Fourth, the cost to serve sparsely-populated rural areas is substantially higher per line than the cost to serve densely-populated urban areas.

Again, this data has important implications for the Commission's numbering optimization policies. To accomplish its objective to impose the "least societal cost possible, in a competitively neutral manner, while obtaining the highest benefit,"<sup>25</sup> the more extensive and expensive numbering optimization techniques should be implemented only in the largest metropolitan markets and focused on carriers with low utilization.

***B. THE COMMISSION SHOULD NOT ADOPT POLICIES BASED ON SPECULATION REGARDING NANP EXHAUST***

The NPRM expresses substantial concern that the current pace of area code relief, if allowed to continue, would cause premature exhaust of the NANP.<sup>26</sup> This concern is based primarily on a study prepared by Lockheed Martin, the current numbering plan administrator and the provider of the national database infrastructure used to support LNP, which suggests that NANP expansion could occur sometime between 2006 and 2012.<sup>27</sup> Although recognizing that the Lockheed Martin study has been criticized by the industry, the NPRM nonetheless states that

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<sup>25</sup> See NPRM at ¶ 6.

<sup>26</sup> See NPRM at ¶¶ 5, 31-34.

<sup>27</sup> See *id.* at ¶ 32.

the need to adopt policies designed to expand the life of the NANP are “apparent and immediate.”<sup>28</sup>

SBC strongly disagrees. The Lockheed Martin study is entirely not credible, and any reliance on it is misplaced. An industry review group, sponsored by the NANC and consisting of representatives from all industry segments with extensive experience in the all segments of the telecommunications industry, extensively reviewed the Lockheed Martin study, and did not agree with its conclusions.<sup>29</sup> Other, more reasonable estimates show that NANP exhaust is so far in the future that, in light of the current pace of technological developments, no reasonable and reliable prediction can be made when the NANP will exhaust. As such, there is no credible basis at this point on which the Commission could conclude that actions must be taken in order to prolong the life of the NANP, and the Commission should not base any decisions in this proceeding on speculation regarding the possibility of premature NANP exhaust.

**1. Lockheed Martin’s NANP Exhaust Study Substantially Overstates Area Code Demand and NANP Exhaust**

The Commission should reject the Lockheed Martin study in its entirety as wholly incredible. In considering the credibility of the Lockheed Martin NANP exhaust study, the Commission should consider the source of the study and its underlying assumptions. The Commission should also recognize that Lockheed Martin has refused to accept industry input that would modify its assumptions, and that Lockheed Martin has a strong financial incentive to overstate the demand for new area codes and NANP exhaust.

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<sup>28</sup> *NPRM* at ¶ 5.

<sup>29</sup> See Report of the NANP Exhaust Review Team, at 3 (May 3, 1999), *attached to* Letter from Alan Hasselwander, NANC, to Lawrence Strickling, FCC (May 12, 1999) [hereinafter *NANC NANP Exhaust Review Team Report*].

As an initial matter, the Commission needs to consider the source of Lockheed Martin's study. The study was designed and prepared by Lockheed Martin's Communications Industry Services division, without any notice to or advice from the industry. In fact, SBC has been informed that Lockheed Martin's own area code relief planners, who have experience in area code relief issues, were not consulted during the preparation of the study. When the industry attempted to provide input to make some of the more incredible assumptions more realistic, input based on extensive telecommunications experience, Lockheed Martin largely refused to accept their observations and suggestions. Thus, the study not only was produced without extensive input from experienced individuals, but Lockheed Martin affirmatively *refused* to accept comments provided by experienced individuals concerning the erroneous assumptions made in its study.

In considering this NANP exhaust study, the Commission should recognize that Lockheed Martin has a strong financial incentive to overstate NANP exhaust projections, and to overstate the benefits that TBNP might provide to delay exhaust. As the sole source provider of the Number Porting Administration Center ("NPAC"), compensated in part based on the number of porting transactions, Lockheed Martin stands to benefit financially by increasing the number of number porting transactions processed by the NPAC, and the number of porting transactions would be dramatically increased by TBNP. Lockheed Martin's study not only exaggerated NANP exhaust, it also contained an unrealistic estimate of the benefits of number pooling. Lockheed Martin's report should be recognized for what it is – an advocacy piece in favor of TBNP, produced by the one company who is most likely to benefit financially from any decision to implement TBNP.



The Lockheed Martin NANP exhaust study consists of two modules: (a) a “tops down” model, which uses the number of new area codes introduced in the past few years to extrapolate a linear, compound growth rate (“Model 1”); and (b) a “bottoms up” model, which relies on a number of assumptions and projections concerning NXX demand to predict exhaust of a “model NPA,” which, in turn, is used to estimate the number of required new area codes (“Model 2”). The results of these “models” are highly manipulatable, depending on the underlying assumptions employed.

Model 1 is fundamentally flawed by the single fundamental assumption underlying its design and its reliance on a relatively small number of data points. That assumption is that the growth rate in the assignment of new area codes will continue to grow at 12 percent, the same level that it has risen in the past few years, and that this exponential growth will continue until the NANP exhausts. This assumption is critical, because it fails to recognize that the area code growth rate was extremely low prior to the passage of the Telecommunications Act of 1996 (the “Act”), and the growth rate jumped precipitously thereafter. Put another way, this is like assuming that a major event such as the introduction of local exchange competition occurs every few years, which causes constant *incremental growth* in the number of area codes assigned each year.

Not surprisingly, given the fundamental flaw in the design of this model, the NANC review team found that it was not credible. The “Executive Summary” provided by the review team states:

Although the Review Team *did not agree with NANPA's estimate* of future NPA demand, they did agree that projecting demand depends upon many things but there is a single critical element,

*i.e.*, whether recent NPA demand is an aberration or whether it represents a trend that is likely to continue.”<sup>30</sup>

Given the fundamental flaw in its design, it is not surprising that Model 1 yields wholly incredible results. By 2008, the Model concludes that 410 new area codes would be introduced in the United States. In 2008, the model concludes that at least 65 new area codes would need to be introduced, more than double the amount of area codes introduced in any one year in the entire history of the NANP.<sup>31</sup> The review team noted that only in one year did the NANP expand by as many as 30 area codes (1997). The NANC review team noted that 1997 might well have been an aberration rather than a “trend” that should be assumed into future projections. The model, however, did not exclude from its compound growth rate calculation the highest and lowest number in its extremely small sample. The aberration is magnified by the fact that the model uses only a few data points to extrapolate into a compound growth rate.

Model 2, the “bottoms up” model, yields results similar to, and it is just as incredible as, Model 1. The NANC review team “disagree[d] with many of the assumptions used by NANPA in” this model, but the model was designed so that many of the assumptions ultimately did not affect the outcome of the model.<sup>32</sup> Ultimately, only two variables had any significant affect on the NANP exhaust predicted by Model 2: the number of new entrants, and the number of rate centers where these new entrants would demand initial codes for “footprint.”

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<sup>30</sup> See *id.* at 3 (emphasis added). See also Letter from Michael Altschul, CTIA, to Alan Hasselwander (April 22, 1999) (criticizing the Lockheed Martin study), *attached to attached to* Letter from Alan Hasselwander, NANC, to Lawrence Strickling, FCC (May 12, 1999).

<sup>31</sup> See *Lockheed Martin Study*, *supra* note 13, at 2-2.

<sup>32</sup> For example, the Lockheed Martin model overstated new entrant demand for NXX codes by assuming that all growth would be met through new numbering resources. This assumes that no increase in utilization of existing numbering resources, including the new entrant footprint NXX codes, and no substitution effect from LNP. However, the model so thoroughly overstated

By 2008, the Lockheed Martin study assumed there would be a total of 25 wireline new entrants by 2008, each with one NXX code in at least 4,386 rate centers.<sup>33</sup> The model also assumes 26 total wireless carriers (13 two-way service providers, and 13 paging service providers), for a total (assuming one incumbent local exchange carrier) of 52 providers in many markets.<sup>34</sup> Taken together, the Lockheed Martin study assumes a total of 203,035 “footprint” NXX codes. This represents enough NXX codes to fill approximately 256 area codes – more than the total number of area codes in operation in the United State today – or a total of 2.0 billion telephone numbers. While these assumptions are unreasonably high on their face, *the Lockheed Martin study assumes that not one of these two billion telephone numbers is ever assigned to a customer.* In the Lockheed Martin study, all growth is accommodated through new telephone numbers, or what the study calls, “TNs.”

Not surprisingly, the NANC review team found Model 2 fundamentally flawed as well. As stated in the team’s report:

The industry review team disagrees with many of the assumptions used by NANPA in its bottom up NANP Exhaust projection. However when all changes recommended by industry are reflected in the NANPA Model, with the exception of two factors driving new providers’ NXX demand, the estimated NANP exhaust date shifts only about two years, to 2010 versus NANPA’s 2008 estimate. When industry concerns about the assumptions used to drive new providers’ NXX demand also are included, the NANP exhaust date estimate moves to 2016. A further refinement (capping the quantity of new “equivalent CLECs” at 20 in 2005) indicates a NANP exhaust of 2023.<sup>35</sup>

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demand that this incredibly flawed assumption had very little impact on the outcome of the model.

<sup>33</sup> *Lockheed Martin Study*, *supra* note 13, at 3-16 & Appendix B-2.

<sup>34</sup> *Lockheed Martin Study*, *supra* note 13, at Appendix B-3.

<sup>35</sup> *NANC NANP Exhaust Review Team Report*, *supra* note 29, at 3.

SBC believes that the adjustments noted by the NANC review team are far more credible than those developed by Lockheed Martin. Although the number of new entrants and the number of rate centers they will enter are difficult to predict (as the NANC review team report admits), Lockheed Martin's projections are so far beyond any reasonable basis, they must be rejected.

**2. NANP Exhaust is so Far in the Future That it Cannot be Predicted to any Reasonable Degree of Certainty**

SBC believes the range developed by the NANC review team (2016-23) is a reasonable estimate of the "*worst case*" estimate of NANP exhaust. SBC conducted an informal analysis of the "*worst case*" review of area code assignment in the areas where it provides local exchange service, and this internal "*worst case*" review, if extrapolated to the rest of the country, results in NANP exhaust in approximately the same range as the range proposed by the NANP review team. However, even these "*worse case*" estimates assume that the demand for NXX codes will continue at an extremely high rate for many years, that the policies adopted in this proceeding would have no effect on the pace of area code relief, and no technological developments will occur that would allow more efficient use of telephone numbers in the next 20 years.<sup>36</sup>

Even "*worse case*" analyses underestimate the date that the NANP would actually exhaust. Actual exhaust likely would be several years later than these projections, because the

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<sup>36</sup> It is unreasonable to assume that the policies adopted in this docket would have no impact on area code demand. If the Commission acts to improve utilization rates by adopting administrative measures such as fill rates and making changes in area code relief policies to ensure area codes are assigned more efficiently, this should have an impact on the pace of area code relief. No NANP exhaust projection to date has attempted to quantify the benefits from these policies, or account for them in NANP exhaust predictions. To assume that these policies would have no effect at all clearly understates the life of the NANP.

projections do not include available resources that would be assigned before exhaust of the NANP. First, there are 80 area codes reserved specifically for NANPA exhaust which are not included in the projections.<sup>37</sup> These 80 area codes, which represent almost 64,000 NXX codes (633.6 million telephone numbers), are specifically *intended* to be used for NANP expansion and almost certainly would be assigned before NANP exhaust. Second, the “D digit” would need to be opened prior to NANP expansion, which would increase the supply of NXXs in every area code in the NANP by as much as 20 percent. Taking these two supplies of numbering resources into account, NANP expansion almost certainly would occur several years later than these “worse case” scenarios.

It is entirely unclear at this point whether demand for new area codes, even if unmodified by regulatory policies, will continue at its current pace, or how long it might continue. In fact, there is evidence that area code demand already may be slowing in some areas. For example, in the five state area where Southwestern Bell Telephone Company (“SWBT”) provides local exchange services, *seven* new area codes were introduced in 1997. In 1998, no new area codes were added, and in 1999, only *four* new area codes will be introduced. At this point, within all 32 of the area codes within the SWBT region, only *two* area code relief projects are in planning. This is a dramatic reduction in the introduction of new area codes within these five states.<sup>38</sup> If demand elsewhere decreases in the same manner, it is highly likely that even the NANC review team projection is unrealistically short, and it proposes a life that could extend 24 years.

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<sup>37</sup> See *Lockheed Martin Study*, *supra* note 13, at 2-2.

<sup>38</sup> Moreover, as noted in note 21 and accompanying text, total NXX code assignments also fell more than 28 percent between 1997 and 1998.

It is unrealistic to assume (as all of these studies do) that there will be no technological innovations that will reduce the demand for area codes in the next 24 years. The public switched network has undergone radical changes in the past 24 years. Switches have radically changed as well over the past 24 years and have converted from fully mechanical switches (step-by-step) to analog switches (1AESSs) and now digital switches. Out of band signaling and databases have revolutionized telephony services and capabilities. Interoffice facilities have transitioned from copper to fiber, bring a dramatic increase in call carrying capacities. Operator services transitioned from switchboard operators to an automated system. Already there are industry standards that allow telephony addressing using non-NANP numbers (for asynchronous transfer mode ("ATM") high-speed data services). Single telephone number services, in which a customer would use only one telephone number for a number of services, are offered by some carriers, and these services may ultimately may lead to customers having a single NANP telephone number instead of several such numbers. About the only thing that can be predicted with any degree of certainty about the telecommunications industry in 2020 is that the industry will undergo substantial technological changes and will look very different 20 years from now than it looks today. As a result, it is sheer speculation, given that NANP exhaust is 20 years or more in the future, to make any prediction about when, if at all, the NANP will exhaust.<sup>39</sup>

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<sup>39</sup> SBC thus believes that there is only theoretical support for the NPRM's statement that there is "general agreement that the expected life of the NANP is limited." *NPRM* at ¶ 32. While in theory, the life of the NANP is limited, as a practical matter, it is sheer speculation that the NANP will exhaust any time in the near future.

### **3. No Reliable Estimate Exists of the NANP Expansion Costs**

The NPRM questions how long it would take to expand the NANP, and how much NANP expansion would cost society. The reason for the NPRM's inquiry regarding the time to expand the NANP is that if NANP expansion would take a substantial period of time, and NANP exhaust is imminent, then work must begin immediately to plan for NANP expansion.<sup>40</sup> It is clear that NANP expansion will take a substantial amount of time; however, as discussed in the preceding section, NANP exhaust is not imminent, and there is more than enough time to prepare for NANP expansion, NANP expansion becomes necessary in the future.

The NPRM also asks for estimates of the costs to expand the NANP, stating that "preliminary estimates" of the total costs discussed at the February 1999 NANC meeting established a range of \$50 to \$150 billion."<sup>41</sup> However, there has never been any analysis or estimate performed of the costs to expand the NANP, and the \$50 to \$150 billion statement, made during a NANC meeting, was nothing more than that – a bald statement, with no supporting analysis or documentation. In short, that "estimate" is nothing more than a "regulatory myth." To the best of SBC's knowledge, there is no reason to believe that the cost of NANP expansion could be anything near this range – the costs of NANP expansion should be a fraction of this amount. However, until the plan for NANP expansion is more fully developed, there is no reasonable basis on which to make any estimate of NANP expansion costs.

Finally, the NPRM suggests it would be "particularly helpful" for commentors to "weigh the cost of extending the life of the current NANP through the various proposed

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<sup>40</sup> See *NPRM* at ¶ 33. The planning for NANP expansion has already begun, as the Industry Numbering Committee ("INC") already has a industry group investigating NANP expansion.

<sup>41</sup> *NPRM* at ¶ 34 (parenthetical omitted).

numbering optimization strategies against the projected cost of expansion of the NANP.”<sup>42</sup> For the reasons stated above, SBC respectfully suggests that any such comparative analysis would not be accurate or useful, and very likely could be grossly misleading. There is no reasonable basis on which costs can be estimated, or the present value of money reasonably predicted, more than 20 years in the future.<sup>43</sup> Accordingly, SBC urges the Commission to base its policy choices on the proven and reliable data that is available at this time, and not any speculation regarding the possible timing of NANP exhaust or the (as yet) unestimatable costs of NANP expansion.

### **III. THE COMMISSION SHOULD PHASE-IN A UNIFORM 70 PERCENT UTILIZATION THRESHOLD FOR ALL CARRIERS**

The Commission requests comment on whether it should adopt a “carrier choice” incentive-based mechanism to increase industry-wide utilization. Under this proposal, the Commission would proscribe a required utilization rate that all carriers would be expected to meet, and the Commission would not mandate that carriers implement any particular technical solutions as long as they meet this utilization rate.<sup>44</sup>

SBC strongly supports a modified version of this proposal – a utilization threshold, phased in over three years, which carriers would be expected to meet in most circumstances in order to secure additional numbering resources. If implemented correctly, a

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<sup>42</sup> *NPRM* at ¶ 34.

<sup>43</sup> Thus, the Commission should not rely on any net present value calculations, such as that presented in the *NPRM*. See *NPRM* at ¶ 34 n. 51. In addition to the speculative inputs of costs and dates, the Commission’s recommended three percent “real cost of capital” is grossly understated. SBC estimates that the short term weighted average cost of capital its telephone companies is currently 9.5 percent with moderate risk. The risk associated with a *society-wide* investment that could involve many billions of dollars spread throughout society, with constantly changing technology, more than 20 years in the future is significantly beyond the scope of a traditional net present value analysis.

<sup>44</sup> See *NPRM* at ¶ 216.



utilization threshold would offer administrative simplicity, would maximize carrier choice, would permit carriers to minimize their costs, and would directly increase utilization rates. If applied uniformly to all carriers, “carrier choice” would ensure that numbering optimization policies remain competitively neutral and even-handed. Where specific proposals can be applied to specific carriers, SBC thus urges the Commission to adopt a utilization threshold as a part of its number optimization policies.<sup>45</sup>

However, to provide the maximum benefit, a single utilization threshold would need to be applied equally to all carriers, and it would need to be phased in over the next several years. In addition, the utilization rate should be applied, at least initially, only in the major metropolitan areas (the largest 100 MSAs) where demand for numbering resources currently is greatest. Limited exceptions to the threshold would be needed to allow carriers to receive needed resources where they have implemented all optimization methods required by the Commission. In addition, a “carrier choice” strategy would have to be implemented in connection with other policies to be effective.

A utilization threshold would need to be phased in over time and not imposed immediately on carriers. In order for carriers to take advantage of the flexibility inherent in a utilization threshold, carriers would need sufficient time to determine the standards that they must meet and to choose and implement policies to accomplish that goal.

SBC proposes that a utilization rate initially be applied to determine which LNP-capable carriers should implement TBNP. Carrier who have NPA-wide utilization below the

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<sup>45</sup> Some potential policies, such as those associated with ten-digit dialing, relieving area codes, consolidating rate centers, and forecasting NXX demand, cannot be meaningfully applied to only some carriers and therefore “carrier choice” would not be applicable. Others, such as utilization

threshold should be required to participate in TBNP in that NPA; carriers who have utilization above the threshold should not.<sup>46</sup>

The NPRM suggests that the maximum benefits of a “carrier choice” strategy could be realized by setting the utilization rate low initially and increasing it over time.<sup>47</sup> SBC agrees. Setting a lower utilization rate would give carriers maximum incentive to voluntarily improve their utilization and minimize the cost to society of increasing utilization; alternatively, setting a utilization rate that is too high initially could result in carriers being unable to meet the threshold. SBC thus recommends that the initial utilization rate, used to determine which carriers are initially required to implement TBNP should be set at 55 percent.<sup>48</sup> The prescribed utilization rate should then increase five percent a year thereafter to a maximum of 70 percent at the end of the three-year period.<sup>49</sup> Carriers should calculate utilization rates for this purpose at an area code-wide level.

During the three year phase-in period, carriers should be required to provide “Months To Exhaust” forecasts to establish their need for additional numbering resources in the

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reporting and audits, should be applied to all carriers to ensure that carriers are meeting the prescribed utilization rates.

<sup>46</sup> The Commission should mandate that wireline carriers entering new area codes after the implementation of number pooling implement LNP and number pooling in those area codes.

<sup>47</sup> See NPRM at ¶ 220.

<sup>48</sup> The definition of “working telephone numbers” and the method for calculating utilization, are discussed in Sections IV.A and IV.C, *infra*. As explained in more detail in that section, utilization should be mandated and reported at the “Lowest Code Assignment Point,” or “LCAP,” which is discussed in Section IV.C.3, *infra*.

<sup>49</sup> The Commission questions whether state commissions should be permitted to establish utilization requirements. See NPRM at ¶ 224. SBC strongly recommends that the Commission establish a single, national utilization threshold and a uniform method for calculating utilization. A single, uniform national standard would be easier for NANPA, carriers, and auditors to administer than multiple different state standards. Moreover, a national standard likely would

rate center, and carriers should be required to report their current utilization rate for numbering resources in that applicable area.<sup>50</sup> In the event that the reported utilization falls below the mandated utilization threshold, carriers should be required to provide a written justification of the need for additional resources on the “Months To Exhaust” form. This written statement would be subject to review in the event of an audit.

The Commission should not impose different utilization rates for different classes of carriers. It would be a clear and unequivocal violation of competitive neutrality to adopt such an approach.<sup>51</sup> Moreover, different utilization rates would undermine the entire purpose of a “carrier choice” strategy to provide for cost-effective optimization of number resources, because it could permit some classes of carriers to maintain low utilization and impose costly requirements on carriers with efficient utilization. If the Commission wants to ensure that the industry achieves a high utilization, it needs to mandate a uniform requirement for all carriers.

After the phase-in period is complete, a carrier normally would be expected to meet the required utilization rate for existing resources at the “Lowest Code Assignment Point” (“LCAP”) before receiving additional resources.<sup>52</sup> However, limited exceptions should be allowed. If a carrier implements all required numbering optimization techniques, including TBNP where it is implemented, and still falls short of the prescribed utilization threshold, but can establish a legitimate business need for additional resources, the carrier should not be denied needed numbering resources. To ensure that carriers have access to the numbering resources that

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result in achieving higher utilization by the industry, particularly if some states did not adopt utilization requirements.

<sup>50</sup> The verification of need for numbering resources is discussed in more detail in Section IV.B, *infra*.

<sup>51</sup> See *NPRM* at ¶ 220.

<sup>52</sup> The LCAP is discussed in more detail in Section IV.C.3, *infra*.

they truly need, the Commission should direct the NANC to establish detailed, specific circumstances in which NANPA would assign resources to carriers who do not meet the utilization requirement. There will be some circumstances where carriers might legitimately not be able to meet the prescribed utilization threshold. For example, a wireless carrier might fall below the utilization threshold for a short period before the start of the holiday season, when it needs substantial resources to meet anticipated demand. Similarly, a rate center serving a large university might experience a low utilization rate during summer recess, but a high utilization the remainder of the year. Alternatively, a competitive local carrier might be participating in TBNP, assigning numbers sequentially, and taking all necessary steps to assign numbers to customers, but it might not have enough demand from customers that need new services to fill 700 numbers in a single block of 1,000 numbers. However, these carriers also should not need additional resources, except in rare instances. A phased deployment of the “carrier choice” threshold over three years would also provide an opportunity to increase their utilization rates up to the required level, and thereby reduce the need for exceptions.

Carriers should not be “penalized for failing to meet the prescribed utilization rates.”<sup>53</sup> Such an approach could be counterproductive and unfair to carriers who are using resources efficiently and legitimately, but nonetheless fail to meet the prescribed utilization rate. If the Commission discovers that a carrier fails the utilization rate and has failed to implement required optimization techniques, or has affirmatively misrepresented its utilization rates, then penalties should apply; however, carriers should not automatically be penalized for failing to meet the prescribed utilization rates. Restricting a carrier’s ability to get new numbering

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<sup>53</sup> See *NPRM* at ¶¶ 221, 224.

resources where it has low utilization should ensure that carriers have adequate incentives to increase their utilization rates to the prescribed level.

The "carrier choice" strategy should only be applied to the major metropolitan areas of the country, and not in rural areas. The Commission recognizes that it might make sense to have "no requirement at all" in rural areas because of the relatively low demand for numbers in these areas.<sup>54</sup> In fact, in these areas, particularly for the carrier of last resort, optimization measures likely will not be very effective in increasing utilization. As just one example (one that occurs quite frequently in many local exchange territories), a carrier of last resort might be the only carrier in a town of 5,000 people or less, and that town very likely would have its own rate center (because of the distance from other areas). In this circumstance, the carrier of last resort would have to have a full NXX to provide service to these 5,000 people, and would likely use substantially less than 5,000 of the numbers in the NXX. A "carrier choice" strategy in this instance is unlikely to appreciably increase utilization. These situations are common today in many rural areas. Applying a utilization threshold to rural areas also would not solve the principal problem facing regulators today, which, as discussed above, is caused by the high numbering resource demand, which is largely concentrated in major metropolitan areas. In the event that the demand for numbering resources extends to rural areas at some point in the future, the Commission can consider then whether to extend the utilization requirement to rural areas.

#### **IV. THE COMMISSION SHOULD STRENGTHEN NUMBERING ADMINISTRATION AND ENFORCEMENT**

SBC strongly supports the NPRM's proposal to adopt a series of administrative measures to "inject a greater degree of discipline into the process of allocating and assigning

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<sup>54</sup> See *NPRM* at ¶ 222.

numbering resources.”<sup>55</sup> Specifically, SBC endorses adoption of numbering usage definitions that must be followed by all providers; detailed showing of need requirements for initial and growth codes, including the phase-in of the utilization threshold adopted in the previous section, mandatory forecasts and utilization reporting, aggressive policies and procedures for NXX code reclamation, and a comprehensive audit and enforcement program. SBC believes that these measures can provide substantial benefits by ensuring that carriers ask for and retain only those numbering resources that they need. At the same time, SBC agrees that these measures can be implemented relatively quickly and at substantially lower cost than other options (such as TBNP).<sup>56</sup>

The NPRM asks a series of questions regarding whether these administrative requirements should be promulgated into regulations or incorporated into existing industry guidelines.<sup>57</sup> It is important that the requirements adopted in this proceeding be enforceable against all carriers, but it also believes that the more detailed requirements (such as the definitions of specific categories of number usage) need to be flexible and capable of modification to be workable; slow moving, inflexible set of rules might not be able to keep pace with the marketplace.

Thus, SBC recommends that regulations be promulgated that would require carriers to comply with general principles and more detailed specific requirements be incorporated into guidelines (with regulations mandating carrier compliance with the guidelines). Regulations should require that all carriers comply with industry guidelines, and that all carriers provide forecasts and utilization data as adopted in the guidelines in accordance with the usage

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<sup>55</sup> *NPRM* at ¶ 37.

<sup>56</sup> *See NPRM* at ¶ 37.

category definitions (adopted in this proceeding and incorporated into the guidelines).<sup>58</sup> In addition, detailed regulations or changes to regulations should be promulgated to delegate additional authority to state commissions and to establish additional requirements of NANPA.

***A. NUMBER USAGE CATEGORY DEFINITIONS SHOULD BE INCORPORATED INTO INDUSTRY GUIDELINES***

Uniform definitions of categories of number usage are essential to collect accurate and meaningful data of carriers' numbering resource usage, and they are essential to policy makers in tracking and monitoring numbering administration standards. Standard usage definitions also are key to enforcement of administrative standards, as the disclosure of accurate utilization rates of individual carriers to regulators, NANPA, and auditors, necessarily should be a cornerstone of any enforcement program. To that end, SBC has been and continues to be an active proponent in the ongoing industry efforts to develop a comprehensive set of number usage definitions. SBC thus strongly supports the Commission's tentative conclusion that a uniform set of definitions for the status of numbers be established.<sup>59</sup>

The Commission correctly notes that the industry, through the Industry Numbering Committee ("INC") and the NANC, "already has devoted a substantial degree of effort to developing a uniform set of number status definitions...."<sup>60</sup> SBC agrees, and it generally supports the definitions developed by the INC and the NANC as a complete and

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<sup>57</sup> See, e.g., *NPRM* at ¶ 40.

<sup>58</sup> The guidelines that are most central to the issues in this proceeding are the INC's Central Office Code Assignment Guidelines, the NPA Relief Planing Guidelines, the Thousand Block Pooling Administration Guidelines (which would apply only where TBNP is implemented, and only to TBNP-participating carriers), and the guidelines for the aging of telephone numbers ultimately adopted by the INC.

<sup>59</sup> See *NPRM* at ¶ 39.

<sup>60</sup> *NPRM* at ¶ 40.

comprehensive set of number usage status definitions that should be followed by all carriers.<sup>61</sup> The Commission should direct the INC to incorporate these definitions into existing Central Office Code Assignment Guidelines and the Thousand Block Pooling Administration Guidelines, as intended by the INC.<sup>62</sup> The Commission should adopt regulations to require that all carriers comply with these guidelines in developing and reporting utilization rates.

However, it would not be prudent for the Commission to codify the entire set of number usage definitions into regulations, at least at this time.<sup>63</sup> The INC's work on the definitions is continuing, and it has adopted, or is actively considering whether to adopt, modifications to several of the definitions set forth in the NPRM.<sup>64</sup> The industry is still considering the appropriate standards to govern "reserved" numbers, and it has not finalized a definition (although it intends to do so as soon as the underlying policy issues are resolved by the Commission).<sup>65</sup> Some of the proposed revisions involve minor "cleanup" of the definitions, others are important to eliminate ambiguity, and others are essential to ensure that the definitions yield accurate and verifiable results. It is quite possible that further refinements to the definitions may be advisable in the future. The definitions are very new, and it is quite likely that, as carriers

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<sup>61</sup> The Commission questions whether any numbering usage definitions would be necessary or useful, such as whether a definition should be added for numbers assigned to resellers. *See NPRM* at ¶ 40. SBC does not believe that any further number resource definitions are necessary at this time, but, in the event that it would be necessary or useful to consider additional definitions in the future, the industry standards process could develop these additional definitions.

<sup>62</sup> *See NPRM* at ¶ 35.

<sup>63</sup> *See NPRM* at ¶ 40 (seeking comment on whether the proposed definitions should be codified in regulations).

<sup>64</sup> Definitions that the INC has already modified or is considering modifying include the definitions of "administrative" numbers, "wireless E911 emergency services routing digits/key (ESRD/ESRK)" numbers, "aging" numbers, numbers assigned to "dealer number pools," and "ported out" numbers.



begin to actually use the definitions, the industry, NANPA, auditors, and commissions will discover ways that the definitions can and should be improved.

It would be extremely cumbersome and time-consuming for the Commission to make these needed improvements in the definitions through codifying the definitions in regulations. The “lag” time between the time that necessary modifications are adopted by the industry and the time that the Commission modifies the regulations could lead to substantial periods where problems and ambiguities undermine the efficacy of utilization rates. As a result, it would be better for the Commission to ensure that the definitions are incorporated into industry guidelines, where necessary corrections and refinements can be made in a more timely fashion.

Responses to inquiries regarding specific definitions are set forth below.

#### **1. “Internal Business Purpose/Official” Numbers**

The NPRM asks what purposes official numbers are used for, and whether it should specify appropriate or inappropriate uses for official numbers.<sup>65</sup> These numbers are used for a variety of purposes, including ordinary business lines, internal network operations, and the like. At this point, there is no reason to believe that carriers are mischaracterizing numbers as official numbers, or otherwise misusing this category. The usage of these numbers needs to be flexible depending on market needs, and overly strict restrictions on these numbers could interfere with carriers’ abilities to provide service in an efficient manner. Accordingly, SBC does not recommend any restriction of this category (other than that the numbers be used for “official business purposes”).

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<sup>65</sup> See NPRM at ¶¶ 46-50.

<sup>66</sup> See NPRM at ¶ 41. The INC has agreed to change the number of the category previously called “employee/official” number to “official business purpose/official” number.

## 2. "Test" Numbers

The NPRM asks for an explanation of how test numbers are used and whether the Commission should tighten the definition by "specifying appropriate testing uses for numbers, or by identifying uses that are not appropriately termed 'testing.'"<sup>67</sup> SBC uses test numbers for all types of testing, including use by maintenance technicians at customer locations, and for internal network and inter-company inter-network test procedures.

At least one state commission has expressed concern regarding the number of test codes used by carriers in that state. There may be reasons why different test numbers and different categories of test numbers, could be necessary in different states.<sup>68</sup> Accordingly, SBC suggests that the Commission should encourage state commissions to work with the NANPA and the industry to reclaim any unnecessary "test" codes.

## 3. "Aging" Numbers

The NPRM asks whether the Commission should adopt standards for "aging" of telephone numbers.<sup>69</sup> Aging, as the NPRM notes, is the process of leaving a number unassigned for a period after service is disconnected. Aging serves an extremely valuable function for customers and carriers alike. For customers, aging intervals allow notification to be provided to anyone calling the disconnected number advising the caller of the called party's new telephone number. This is of utmost importance to many business customers, who rely on telephone calls for the majority of their businesses. Aging intervals also provide a "grace period" for new

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<sup>67</sup> NPRM at ¶ 41.

<sup>68</sup> See, e.g., *Massachusetts Department of Telecommunications and Energy Request for Additional Authority to Implement Various Area Code Conservation Methods in the 508, 617, 781, and 978 Area Codes*, Massachusetts Department of Telecommunications and Energy's Petition for Waiver of Section 52.19 to Implement Various Area Code Conservation Methods in the 508, 617, 781, and 978 Area Codes, at 7, NSD File No. L-99-19 (filed Feb. 17, 1999).